frequency, and at least one second winding slot being devoid of a tuning slot.

The Examiner has rejected independent Claims 1 and 9 over the Pavlik et al. patent. More specifically, the Examiner contends that the Pavlik et al. patent discloses a tuning slot that extends radially inwardly from the bottom of the winding slot a distance to tune the rotor to a desired torsional frequency. Applicants respectfully submit that the Examiner has mischaracterized the Pavlik et al. patent.

Applicants assert that the Pavlik et al. patent does not teach or even suggest tuning a rotor, but is rather directed to cooling a rotor. More particularly, Pavlik et al. provides that "[t]he edges of the protruding portions of the ventilating channel and cell have an adverse effect on the flow through the channel because they represent a relatively sharp edged protruding entrance which produces a high inlet pressure drop that results in less then desirable flow rates and hence higher temperatures of the rotor and the conductors therein." (Column 1, lines 27-34). As illustrated in FIG. 3 of the Pavlik et al. patent, "a fairing is disposed against the rotor end face adjacent the protruding cell and channel and shaped to fit closely around the extended portions of the cell and channel and to have a smooth flow transition region that introduces coolant gas into the channel during rotation of the rotor with a low inlet pressure drop". (Column 1, lines 42-48). In other words, Pavlik et al. merely discloses a conventional cooling channel beneath each winding.

Applicants therefore assert that the Pavlick et al. patent is merely directed to cooling a rotor and does not

teach or suggest tuning the rotor to a desired torsional frequency. None of the other prior art supplies this noted deficiency in the Pavlik et al. patent. Accordingly, Applicants submit that independent Claims 1 and 9 are patentable over the Pavlick et al. patent. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

II. Claims 5-8 And 14-20 Are Patentable.

The present invention, as recited in independent Claim 5, for example, is directed to tuning the torsional natural frequency of a rotor having opposing poles and a quadrature axis. More specifically, the method includes forming at least one tuning slot within the winding slots defined by radially projecting winding teeth that are positioned substantially at the quadrature axis. The tuning slot extends radially inwardly from the bottom of the winding slot a distance to tune the rotor to a desired torsional natural frequency.

Independent Claim 14, for example, recites a rotor comprising a rotor shaft, and a cylindrically configured rotor body formed as part of the shaft. The body includes a plurality of radially projecting winding teeth defining winding slots for receiving winding wire therein. The rotor body also includes two or more poles and a quadrature axis. The winding slots have a bottom spaced radially inward. The rotor also includes at least one tuning slot positioned at the quadrature axis and extending radially inward from the bottom

of the winding slot a distance that tunes the rotor to a desired torsional natural frequency. Independent Claim 18 is similar to independent Claim 14.

The Examiner rejected independent Claims 5, 14, and 18 over the Pavlik et al. patent contending that the Pavlik et al. patent discloses a tuning slot that extends radially inwardly from the bottom of the winding slot a distance to tune the rotor to a desired torsional natural frequency. Applicants again submit that the Examiner has mischaracterized the Pavlik et al. patent.

Applicants assert that the Pavlik et al. patent does not teach or suggest a rotor having a quadrature axis. As noted above, the Pavlik et al. patent discloses cooling a rotor by providing a smooth flow transition region that introduces coolant gas into the channel during rotation of the rotor with a low inlet pressure drop. Nowhere in Pavlik et al. is a quadrature axis disclosed.

Applicants further assert that the Pavlik et al. patent does not disclose tuning the torsional natural frequency of a rotor having a quadrature axis. Accordingly, it is submitted that independent Claims 5, 14, and 18 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

CONCLUSIONS

In view of the amendments to the claims and the arguments presented above, it is submitted that all of the

claims are patentable. Accordingly, a Notice of Allowance is respectfully requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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In re Patent Application of:
RICO ET AL
Serial No. **09/731,501**
Filed: **DECEMBER 7, 2000**
_____/

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claim 9 has been amended as follows:

9. (Amended) A rotor comprising:

a rotor shaft;

a cylindrically configured rotor body formed as part of the shaft and having a plurality of radially projecting winding teeth that define winding slots for receiving winding wire therein, said winding slots having a bottom portion spaced radially inward; [and]

at least one first winding slot having a tuning slot that extends radially inward from the bottom thereof [of a winding slot] a distance that tunes the rotor to a desired torsional natural frequency; and

at least one second winding slot being devoid of a tuning slot.

In re Patent Application of:
RICO ET AL
Serial No. **09/731,501**
Filed: **DECEMBER 7, 2000**

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: DIRECTOR, U.S. PATENT AND TRADEMARK OFFICE, WASHINGTON, D.C. 20231, on this 3rd day of July, 2002.